

Claims

- [c1] 1.A mounting configuration for a plurality of antennas, comprising:
a first antenna having a first length, first upper section, a first lower section and a first bottom end,
the first antenna mounted proximate a first end of a support beam at a first point along the first antenna between the first upper section and the first lower section;
a second antenna having a second upper section, a second lower section, and a second bottom end,
the second antenna mounted proximate a second end of the first support beam at a second point along the second antenna between the second upper section and the second lower section.
- [c2] 2.The configuration of claim 1, wherein the first antenna and the second antenna are slotted array antennas.
- [c3] 3.a first antenna feed is connected to the first bottom end and a second antenna feed is connected to the second bottom end.
- [c4] 4.The configuration of claim 1, wherein a first antenna feed is connected proximate the first point and a second

antenna feed is connected proximate the second point.

- [c5] 5.The configuration of claim 1, wherein the first bottom end and the second bottom end are connected to a second support beam.
- [c6] 6.The configuration of claim 1, wherein a second support beam is attached to the first antenna between the first point and the first bottom end and to the second antenna between the second point and the second bottom end.
- [c7] 7.The configuration of claim 1, wherein a third antenna having a third bottom end is mounted to the first support beam at the third bottom end proximate a midpoint of the first support beam.
- [c8] 8.The configuration of claim 1, wherein the first point is proximate a midpoint of the first antenna.
- [c9] 9.The configuration of claim 1, wherein the first point is proximate a position $1/4$ of the first length from the first bottom end.
- [c10] 10.The configuration of claim 1, wherein the first point is proximate a position $1/3$ of the first length from the first bottom end.
- [c11] 11.The configuration of claim 1, wherein the first point is

proximate a position $2/3$ of the first length from the first bottom end.

[c12] 12.The configuration of claim 1, wherein the first point is proximate a position $3/4$ of the first length from the first bottom end.

[c13] 13.The configuration of claim 1, wherein the first support beam is comprised of a plurality of structural beams inter-connected by cross bracing and having a first base proximate the first end and a second base proximate the second end, the first base configured to support the first antenna and the second base configured to support the second antenna.

[c14] 14.The configuration of claim 1, wherein the first support beam is connected to a tower structure.

[c15] 15.The configuration of claim 1, further including: a third antenna having a third length, third upper section, a third lower section and a third bottom end, the third antenna mounted proximate a third end of a third support beam at a third point along the third antenna between the third upper section and the third lower section, a fourth antenna having a fourth upper section, a fourth lower section, and a fourth bottom end,

the fourth antenna mounted proximate a fourth end of the third support beam at a second point along the fourth antenna between the fourth upper section and the fourth lower section; and
the third support beam arranged in a generally tangential orientation to the first support beam.

[c16] 16.The configuration of claim 15, wherein the first support beam and the third support beam are joined, proximate a midpoint of the first support beam and the third support beam.

[c17] 17.The configuration of claim 15, wherein the first support beam is mounted above the third support beam.

[c18] 18.The configuration of claim 15, wherein a center antenna having a fifth bottom end is mounted to the first support beam at the fifth bottom end proximate a midpoint of the first support beam.

[c19] 19.The configuration of claim 15, wherein the third support beam is connected to a tower structure.

[c20] 20.A mounting configuration for a plurality of antennas, comprising:
a first antenna having a first length, first upper section, a first lower section and a first bottom end,
the first antenna mounted proximate a first end of a

support beam at a first point along the first antenna between the first upper section and the first lower section; a second antenna having a second upper section, a second lower section, and a second bottom end, the second antenna mounted proximate a second end of the first support beam at a second point along the second antenna between the second upper section and the second lower section the support beam connected to a top of a tower having a top diameter less than a length of the support beam.

[c21] 21.The mounting configuration of claim 20, wherein the first antenna and the second antenna are slotted array antennas.

[c22] 22.The mounting configuration of claim 20, wherein the support beam is mounted at a midpoint of the support beam to a centerpoint of the tower.

[c23] 23.The mounting configuration of claim 22, further including a second support beam supporting a third antenna and a fourth antenna, the second support beam mounted to the first support beam at the centerpoint of the tower in a generally tangential orientation to the first support beam.

[c24] 24.The mounting configuration of claim 20, further in-

cluding a center antenna having a bottom;
the bottom mounted to a midpoint of the support beam.